

CLAIMS LIST, Marked Up

The following claims are annotated with deleted portions lined out, and added portions in ***bold***, ***italicized***, and bracketed [].

(1) (previously amended, now, twice amended) a machine for measuring angles about a plurality of axes ***[of a single plane at a time]***, comprising:

one or more multi-axis, gravity-sensing, tilt sensor(s), ~~or inertial accelerometer(s)~~, or ~~multiple~~ ***[a plurality of single-axis,]*** gravity sensing tilt-sensor(s), ~~or inertial accelerometer(s)~~ situated about different axes;

a computing device, preferably a microprocessor, that receives inputs from the said tilt sensor(s) ~~accelerometer(s)~~, translates them into expressions of angular measurement and outputs the results for display, computation, or extraction; and

~~a means of mounting components, preferably a case~~ ***[a unitary means of essentially rigidly mounting components, said means comprising, but not limited to, a case or a frame].***

(2) (previously amended, now, twice amended) A machine for measuring angles about a plurality of axes ***[of a single plane at a time]***, comprising:

one or more multi-axis, gravity-sensing, tilt sensor(s), ~~or inertial accelerometer(s)~~, or ~~multiple~~ ***[a plurality of]*** single-axis, gravity sensing tilt-sensor(s), ~~or inertial accelerometer(s)~~ situated about different axes;

1 a computing device, preferably a microprocessor, that receives
2 inputs from the said tilt sensor(s)/accelerometer(s), translates them
3 into expressions of angular measurement calculates compounded
4 angles of the various angles it measures and outputs the results for
5 display, computation, or extraction; and
6 ~~a means of mounting components, preferably a case~~ a unitary
7 means of essentially rigidly mounting components, said means
8 comprising, but not limited to, a case or a frame.
9

10
11 (3) (previously amended, now, twice amended) A machine as in claims (1)
12 or (2) wherein a means of information extraction is incorporated, **[wherein**
13 **the means may comprise, but are not limited to]** in, preferably, a
14 communications port or infra-red transmitter/receiver.
15

16 (4) (previously amended, now, twice amended) A machine as in claim (1)
17 or (2) that displays the results of the measurements and/or calculations in
18 **[pictorial or]** graphic form.
19

20 (5) (previously amended, now canceled) ~~A machine as in claim (4)~~
21 ~~wherein multiple displays may be exhibited simultaneously.~~
22

23 (6) (previously amended, now canceled) ~~A machine as in claim (4)~~
24 ~~wherein multiple displays may be exhibited sequentially.~~
25

1 (7) (previously amended) A machine as in claim (4) wherein multiple
2 displays modes are controllable, being user selectable to exhibit
3 simultaneously or sequentially.

4
5 (8) (previously amended, now twice amended) A machine as in claim (4)
6 wherein one or more **[pictorial or]** graphic displays resemble the form of
7 a bull's-eye bubble level.

8
9 (9) (previously amended, now twice amended) A machine as in claim (4)
10 wherein one or more **[pictorial or]** graphic displays resemble the form of
11 a curved-tube bubble level.

12
13 (10) (previously amended) A machine as in claim (4) wherein the displays
14 appear on different faces of the machine's case according to the axis
15 about which the measurements or calculations producing them are made.

16
17 (11) (previously amended) A machine as in claim (4) that, having
18 calculated a compound angle, can display a line representing the edge of
19 the plane in which that angle lies.

20
21 (12) (previously amended) A machine as in claim (1) or (2) that displays
22 the results of the measurements and/or calculations in numeric form.

23
24 (13) (previously amended, now canceled) ~~A machine as in claim (12)~~
25 ~~wherein multiple displays may be exhibited simultaneously.~~

26
27 (14) (previously amended, now canceled) ~~A machine as in claim (12)~~
28 ~~wherein multiple displays may be exhibited sequentially.~~

1 (15) (previously amended) A machine as in claim (12) wherein multiple
2 displays modes are controllable, being user selectable to exhibit
3 simultaneously or sequentially.

4
5 (16) (previously amended) A machine as in claim (12) wherein the
6 displays appear on different faces of the machine's case according to the
7 axis about which the measurements or calculations producing them are
8 made.

9
10 (17) (previously amended) A machine as in claim (12) that, having
11 calculated a compound angle, can display a line representing the edge of
12 the plane in which that angle lies.

13
14 (18) (previously amended, now twice amended) A machine as in claim (1)
15 or (2) wherein the display format is user controllable, allowing selection of
16 either graphic or numeric format.

17
18 (19) (previously amended) A machine as in claim (18) wherein multiple
19 displays may be exhibited simultaneously.

20
21 (20) (previously amended) A machine as in claim (18) wherein multiple
22 displays may be exhibited sequentially.

23
24 (21) (previously amended) A machine as in claim (18) wherein multiple
25 displays modes are controllable, being user selectable to exhibit
26 simultaneously or sequentially.

1 (22) (previously amended) A machine as in claim (18) wherein one or
2 more graphic displays resemble the form of a bull's-eye bubble level.

3
4 (23) (previously amended) A machine as in claim (18) wherein one or
5 more graphic displays resemble the form of a curved-tube bubble level.

6
7 (24) (previously amended) A machine as in claim (18) wherein the
8 displays appear on different faces of the machine's case according to the
9 axis about which the measurements or calculations producing them are
10 made.

11
12 (25) (previously amended) A machine as in claim (18) that, having
13 calculated a compound angle, can display a line representing the edge of
14 the plane in which that angle lies.

15
16 (26) (previously amended) A machine as in claims (1) or (2) wherein
17 angles may be measured and/or calculated in multiple modes comprising
18 various levels of precision and of speed of measurement and/or
19 calculation.

20
21 (27) (previously amended) A machine as in claim (26) wherein the modes
22 of measurement and/or calculation may be selected automatically by the
23 machine itself.

24 (28) (previously amended) A machine as in claim (26) wherein the modes
25 of measurement and/or calculation may be manually selected by the user.

26
27 (29) (previously amended, now canceled) ~~A machine as in claims (1) or~~
28 ~~(2) wherein one or more means of orienting the device with respect to~~

~~distant or remote reference points is incorporated, these means being preferably by use of a laser light or other electromagnetic energy beam projected from the device, but also including optical sight or reticle, audio beam, mechanical arm or extension, or any other manner of remote reference.~~

(30) (previously amended) A machine as in claims (1) or (2) wherein the measurements and results of calculations may be recorded and later displayed or output for reference.

(31) (previously amended) A machine as in claims (1) or (2) wherein the computing component, preferably, a micro-processor, can automatically select a display mode in accordance with the orientation of the device as detected by the gravity sensing tilt sensor(s) or inertial accelerometers.

(32) (previously amended) A machine as in claim (1) or (2) wherein the ambient temperature is measured and displayed for calibration purposes.

(33) (previously amended, now twice amended) A machine as in claim (1) or (2) wherein a discrete signal, preferably, audio, visual, or electrical, is emitted when the ~~unit attains~~ **[unit's measurements]** one or more pre-determined angular position(s).

(34) (previously amended, now twice amended) A machine as in claim (1) or (2) wherein an alarm signal is emitted that varies in accordance with the machine's **[measurement's]** proximity to **[one or more]** pre-determined angles;

1 (35) (previously amended) A machine as in claim (1) or (2) also
2 comprising a means of recording, or of storing in a memory, a baseline or
3 zero point for each axis from whence angles may be measured;
4

5 (36) (previously amended) A machine as in claim (1) or (2) wherein the
6 functions of angular measurement may be set to reset to zero at pre-
7 determined or user selected angles, presenting, at each applicable angle,
8 a display such as would be exhibited by a conventional bubble
9 inclinometer in the level position.
10

11 (37) A machine for measuring angles about one or more axes of a single
12 plane at a time, comprising:

13 one or more multi-axis, gravity-sensing, tilt sensor(s), or one or
14 more single-axis, gravity sensing tilt-sensor(s), situated about one
15 or more axes;
16

17 a microprocessor, that receives inputs from the said tilt sensor(s),
18 translates them into expressions of angular measurement and
19 outputs the results for display, computation, or extraction, and
20 computes and generates a simulated curved-tube, bubble-level
21 display; and
22

23 a unitary means of essentially rigidly mounting components, said
24 means comprising, but not limited to, a case or a frame.
25

26 (38) A machine as is claim 37, wherein the one or more gravity-sensing tilt
27 sensor(s) comprise one or more sensors using liquid metal as gravity
28 sensing means.

1 (39) A machine for measuring angles about a plurality of axes of a single
2 plane at a time, comprising:
3 one or more multi-axis, gravity-sensing, tilt sensor(s), or one or
4 more single-axis, gravity sensing tilt-sensor(s), comprising one or
5 more sensors using liquid metal as gravity sensing means, situated
6 about one or more axes;
7
8 a microprocessor, that receives inputs from the said tilt sensor(s),
9 translates them into expressions of angular measurement and
10 outputs the results for display, computation, or extraction,
11
12 displays the results of the measurements and/or calculations in
13 *pictorial or graphic form.*
14 a unitary means of essentially rigidly mounting components, said
15 means comprising, but not limited to, a case or a frame.

16
17 (40) A machine as in claim (39) wherein the display comprises a
18 simulated curved-tube bubble-level.

19
20 (41) A machine for measuring angles about a plurality of axes of a single
21 plane at a time, comprising:
22 one or more multi-axis, gravity-sensing, tilt sensor(s), or one or
23 more single-axis, gravity sensing tilt-sensor(s), comprising one or
24 more sensors using liquid metal as gravity sensing means, situated
25 about one or more axes;
26
27 a microprocessor, that receives inputs from the said tilt sensor(s),
28 translates them into expressions of angular measurement and

1 outputs the results for display, computation, or extraction, and
2 computes and generates a simulated curved-tube, bubble-level
3 display; and

4
5 a unitary means of essentially rigidly mounting components, said
6 means comprising, but not limited to, a case or a frame.